



**Great Lakes**  
Chemical Corporation



8EHQ-95-13505  
INIT 09/06/95

VED  
CBIC

P.O. BOX 2200



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EST LAFAYETTE, IN 47906 95 SEP - 6 PM 12:10 PHONE: 317-497-6200 FAX: 317-497-6123

**8EHQ-0995-13505**

30 August 1995

Document Control Office (7404)  
Office of Toxic Substances  
U.S. Environmental Protection Agency  
401 M Street, S.W.  
Washington, DC 20460

**ORIGINAL**  
**Contains No CBI**

ATTN: TSCA Section 8(e) Coordinator

Re: TSCA Section 8(e) Notification on Tetrahydrofurfuryl  
Alcohol (CAS No. 97-99-4)  
(When responding, please refer to JAB-95-148)

Gentlemen:

Great Lakes Chemical Corporation is submitting a TSCA Section 8(e) substantial risk notification concerning a 90-day subchronic dermal toxicity study in rats with tetrahydrofurfuryl alcohol (THFA). The following information was received via an unaudited draft report from WIL Research Laboratories, Inc., Ashland, OH 44805-9281.

Each of the three test article treated groups consisted of 17 male and 12 female rats. THFA was administered undiluted five days per week for 13 consecutive weeks for at least 65 applications to shaved intact dorsal skin. Application sites were wrapped for six hours using an occlusive wrap/binder. Selected dosage levels were 100, 300, and 1000 mg/kg/day. A concurrent control group of identical design received 0.9% saline on a comparable regiment at a dose volume (0.95 ml/kg) equivalent to the highest dose level.

After 37 applications, five males per group were terminated from the study for assessment of spermatogenic endpoints. The remaining 12 animals per sex per group were terminated following 13 weeks of study (65 applications). All animals were observed for signs of overt toxicity, dermal irritation, effects on body weight, food consumption, and hematology and serum chemistry parameters. Spermatogenic endpoints were evaluated for all males. Complete necropsies were performed on all animals and selected organs were weighed. Microscopic examination was conducted on selected tissues from all animals terminated at 13 weeks.

TSCA Section 8(e) Coordinator  
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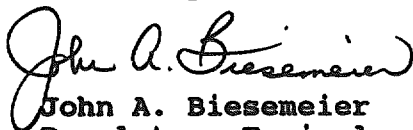
All animals survived to scheduled necropsy. No test article related clinical signs were observed at any dose level and only very limited dermal irritation occurred. Mean food consumption and hematology and serum chemistry parameters were unaffected by test article treatment. In addition, no test article related macroscopic or microscopic lesions were observed. Organ weights were unaffected by THFA dermal application as well.

However, following 13 consecutive weeks of THFA treatment, lower mean body weights and body weight gains resulted in both males and females at the dose level of 1000 mg/kg/day. Also an adverse effect on spermatogenesis was noted following 13 consecutive weeks of test article administration. The mean number of sperm in the testis and the mean sperm production rate were decreased in both the 300 and 1000 mg/kg/day group males. In addition, a decrease in the mean percentage of motile sperm was noted in the 1000 mg/kg/day group males. Even though spermatogenesis was affected at these two dosage levels, no histopathological lesions were observed in the testis, epididymis, seminal vesicles, vas deferens, prostate, or coagulating gland.

Based on the data obtained, no test article related systemic effects were observed in either the 300 mg/kg/day group females or the 100 mg/kg/day group males and females. Thus, the no observable effect level (NOEL) for systemic toxicity of THFA administered dermally to rats for 13 consecutive weeks was found to be 100 mg/kg/day for males and 300 mg/kg/day for females.

If you have any questions, please feel free to contact me at (317) 497-6223.

Sincerely,



John A. Biesemeier  
Regulatory Toxicologist  
Regulatory Affairs

Best Available Copy

JAB/jb